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Previous references
Edn 3 of 1882

1883
~~191~~
(Education)

File No. 2

Serial Nos. 1-2

Later references

GENERAL AND REVENUE SECRETARIAT

Serial Nos 1 to 2

~~Part~~ B for

SUBJECT

concerning that the Soldiers of Student-ships from the Mysore Government to study at the C & E College Madras may be directed to join the Institution in January

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Indexed

Education

Engineering Scholarships

x Educ Dept
3 D 188
8 of 2

Proceedings of 7th May 1883
Scholarships of Rs 15 a month
were sanctioned for 4 Mysore
students from daty joining
the C E College Bangalore &
the end of 1885 - and they
were directed to join in
August

Principal, C E College
in 26 July 1883 writes that
they cannot join in August
but shd join in Jan 1884

One of the scholars (R a Sama
rasangappa, B A) likewise writes
to request that some scholarship
he was previously drawing, of
which I have no information,
may be continued till Jan 7

Also that as the C E College
fees are Rs 76 a month the
scholarships of Rs 157 for 2½
years sanctioned as above

Hayes converted into
Scholarships of Rs 20/- each
for 2 years

The difference in expenditure
with a Rs 9 20/- against Rs 1800
an increase of Rs 120 for the
2 years

Under the circumstances the change
seems desirable

R 3/8/83

1883-8 744 ?

Civil Engineering College

To the Secretary to the Government of Mysore

No 402 Educational Dept

Dated 21st
Despatched 26th } July 1883
Received

R 3

1/Jan/84

Despatched

Sanction Order
File No 8-83
Serial No 1

Index No
Letter No dated

PREVIOUS PAPER

ABSTRACT

Recommends that the holders of stipends from the Mysore Government to study at the C E College may be directed to join the Institution on January

Civil Branch

CIVIL ENGINEERING COLLEGE MADRAS

No 402 6

Date 21st July 1883
Despatched 26 " "

FROM

THE PRINCIPAL,
CIVIL ENGINEERING COLLEGE,

To

The Secretary to the Government of Mysore, Educational Department

SIR,

I have received letters from the undermentioned candidates for the Level Engineering College Engineer Class, viz

R A Srinivasa Aiyangar, Madras
M B Varada Aiyangar, Mysore
G Narayana Rao, Shimoga

stating that Studentships have been awarded them by the Mysore Government from 1st August 1883, and requesting to be permitted to join the College at that date

2) Their joining at this season would give these Candidates the advantage of two years and

a half of Study instead of the usual two years, but as the College Rules require Candidates for the First Department or Engineer Class to join in January, I am unable to admit them in August without Special sanction

3 An extension of the College course is in contemplation, but until it is sanctioned, I recommend that the holders of Studentships from the Mysore Government should be directed to join the Institution in January

4 Rules for admission to the different Departments of the College and Regulations regarding the tests for the certificates granted are enclosed for your information

I have the honour to be,
Sir,
Your most obedient Servant,
W. Love. Lieut R.E.,
Principal

CIVIL ENGINEERING COLLEGE, MADRAS

FIRST DEPARTMENT OR ENGINEER CLASS (CIVIL DIVISION)

The course of study is regulated to afford to gentlemen of liberal education sufficient theoretical and practical training in Engineering to fit them to become Assistant Engineers in the Public Works Department or elsewhere as well as to prepare such gentlemen for the Examination for the degree of Bachelor of Civil Engineering in the University of Madras

Rules of Admission

2 Candidates are admitted annually on 18th January (or if this date falls on a Sunday or Wednesday then on 19th) on production of the following certificates —

(*a*) University F A certificate of the Madras or other Indian University
(*b*) Health certificate from a gazetted Government Medical Officer showing that the candidate is physically fit for the out door duties of the Public Works Department and that he is free from liability to small pox
(*c*) Certificate of age showing that the candidate is over 16 and under 22 years of age
(*d*) Certificate of good conduct and character covering a period of not less than two years immediately prior to the application

No candidate will be admitted after 31st January except under very special circumstances

Course of Study &c

3 The course of study extends over two years Examinations are held half yearly and a final examination conducted chiefly by independent examiners takes place at the end of the course when certificates of qualification as Assistant Engineer Public Works Department are awarded to successful candidates A general idea of the subjects studied will be gained from the *Rules for the Final Examination for certificates as Assistant Engineer* The department is divided into two classes comprising first and second year students respectively Each class attends early out door work two or three times a week executing surveys taking levels setting out work inspecting the manufacture of building materials the progress of masonry works under construction &c Notes are made of all inspections and fair reports have subsequently to be submitted The in door attendances comprise four daily of 1½ hours each one being generally devoted to each of the subject heads Mathematics Engineering Surveying Drawing and Estimating

4 The vacations cover about two months in the middle of the year and about three weeks at Christmas Sundays and Wednesdays are non working days

5 The fees are Rs 16 *per mensem* payable on 15th of each month unless that day falls on a Sunday or Wednesday when they are payable on 16th The fees for January are payable on 15th February and those for June and July on 15th August

6 All students are non resident

Students provide their own books and drawing instruments but stationery and surveying instruments are supplied by the College The following books and instruments are required during the course those marked with an asterisk being needed at the outset should be in the possession of students at the time of joining The prices given are approximate —

			Rs	A	P
* Todhunter's Algebra			4	8	0
Todhunter's Plane Trigonometry			4	8	0
Examples in Mensuration			1	8	0
Tables of Squares Cubes &c			0	12	0
Drew's Geometrical Conic Sections			3	8	0
Todhunter's Co ordinate Geometry			4	8	0
Parkinson's Mechanics			8	0	0
Twisden's Practical Mechanics			8	0	0
Rurki Treatise on Civil Engineering	Vol	I	15	0	0
Do do	Vol	II	12	0	0
Do Applied Mechanics	Vol	III	10	0	0

	Rs	A	P
Rurki Manual of Surveying	3	8	0
Civil Engineering College Papers No IX Estimating	8	8	0
Case of Drawing Instruments not inferior to those sold at the Public Works Stores Madras, as *Second* class, about	45	0	0
Set of Marquois Scales	8	0	0
Rolling Parallel Rule, 18 inch	9	0	0
Plotting Scales	12	0	0
Set of colors and brushes	7	0	0

7 The College Library, consisting of about 1 500 volumes, is open to students

8 It is from the passed men of this class that selections are made for the posts of Assistant Engineer and Supervisor Public Works Department The passed students chosen by the Chief Engineer may be appointed in the first instance Assistant Engineer 3rd Grade Apprentice Engineer, or Apprentice Supervisor on salaries of Rs 200 Rs 100 and Rs 90 respectively Apprentices are brought on the permanent streng'h of the establishment after a year of satisfactory service The pay of a Supervisor 2nd Grade is Rs 150

A large field for employment as Engineers and Supervisors under Local Fund Boards and Municipalities has lately been opened up, and vacancies in these capacities are frequent

CIVIL ENGINEERING COLLEGE
Madras
1883

H D LOVE Lieutenant R E
Principal Civil Engineering College

Encl 6 8 8 / 8

CIVIL ENGINEERING COLLEGE, MADRAS

EXAMINATION FOR CERTIFICATES AS ASSISTANT ENGINEER

THE Examination is held annually in December and is open to Second year Students of the College First Department and on payment of a fee of Rupees 2 to independent candidates who have passed the First Examination in Arts of the Madras or other Indian University The Examination takes place at the Civil Engineering College but papers will be sent to any Public Works Department Divisional Office at which an independent candidate may wish to appear Notice of the date of the commencement of the Examination is given in the *Fort St George Gazette* issues of the previous October

The test comprises —

I MATHEMATICS—

(*a*) *Arithmetic* —The whole

(*b*) *Algebra* —Arithmetic processes Involution and Evolution Simple and Quadratic Equations Surds Proportion and Variation Permutations Progressions Binomial Theorem Interest and Discount Text book Todhunter s Algebra

(*c*) *Geometry* —Euclid Books I II III IV VI Definitions of Book V Book XI Propositions 1 to 21 Easy Deductions Any Text book Geometrical Conic Sections including the chief properties of the Parabola and Ellipse Text book Drew

(*d*) *Plane Trigonometry* —Investigation of formulæ Solution of plane triangles Calculation and use of Logarithms Construction of Tables of Goniometric functions Text book Todhunter Chapters I—XI and XIII to XVIII

(*e*) *Mensuration* of Areas Surfaces and Volumes

(*f*) *Co ordinate Geometry* (rectangular co ordinates only) Straight line Circle Parabola Text book Todhunter—Chapters I II III VI

(*g*) *Statics* —Composition and resolution of forces in one plane Centre of Gravity Mechanical powers Virtual Velocities Friction and the Rigidity of Cords Text books Parkinson s Mechanics Twisden s Practical Mechanics—Chapters I I to VII of Part 1

(*h*) *Dynamics* —Measures of force Laws of motion Motion of a material particle under a constant force in free space on an inclined plane and in a circular arc Simple Pendulum Moment of Inertia Text books Parkinson Mechanics Twisden s Practical Mechanics—Chapters I to VIII of Part 2

(*k*) *Hydrostatics and Pneumatics* —The transmission of pressure by and the variation of pressure within fluids Equilibrium of a floating body Specific Gravity Application of Principles to common Pump Force Pump Hydraulic Press Fire Engine Syphon Diving Bell Steam Engine Air Pump and Condenser Thermometer and Barometer Heights by the Barometer Text book Besant s Hydrostatics

II ENGINEERING—

(*a*) *Building Materials* their properties and modes of preparation Stone Bricks Tiles Limes Cements Mortars Concretes and Plasters Timber Iron Paints and Varnishes Text book Rurki Treatise on Civil Engineering

(*b*) *Building Constructions* —Foundations including piles wells iron tubes excavating apparatus coffer dams and caissons Masonry in walls piers arches and retaining walls Carpentry joints frames, floors staircases and centres Roofs terrace tiled and iron Text book Rurki Treatise on Civil Engineering

(*c*) *Earthwork and Road-making* —Cuttings embankments and their volumes Ordinary and hill roads Curve tracing Text Book Rurki Treatise on Civil Engineering

(*d*) *Hydraulics* —Flow of water through orifices over weirs and in rivers, channels and pipes Time of filling and emptying locks Text Book Civil Engineering College Papers No X Part 3

(*e*) *Bridges and Irrigation Works* —Timber masonry and iron bridges tanks their escapes, and sluices Irrigation and navigation channels their head-works weirs sluices falls, locks and other appendages River Improvements Water supply of towns Text Book Rurki Treatise on Civil Engineering

(*f*) *Practical Mechanics* —Properties of materials weight expansion by heat elasticity Hooke s Law effect of stress rupture Work Efficiency of Agents modulus of machines Water wheels Steam indicator Stability of wall Pressure of water pressure of earth Accumulated work Text Book Twisden s Practical Mechanics—Chapters I, II and VIII of Part 1

(*g*) *Applied Mechanics* —Direct stress tension compression elasticity set Stresses in roof trusses and braced bridges effect of wind on roofs Stress diagrams Transverse stress, bending moments and shearing stresses in cantilever and supported beams variously loaded moment of resistance by calculation and diagram deflection Design of beams girders rafters and purlins Strength of fixed beams by empiric formulæ Stress in continuous beams graphically assuming the Theorem of three moments Stability of walls and arches Text Book Rurki Treatise on Civil Engineering Vol 3

III Surveying

(*a*) *Surveying* with the Chain or Chain and Compass (Prismatic or Surveying) Keeping the Field Books Plotting the Surveys Variation of the Compass Use of the Pocket Sextant Plane Table

(*b*) *Levelling* —Use of the Dumpy and Y Levels in taking longitudinal and cross sections and in contouring Adjustments of these instruments

(*c*) *Traversing* with the Theodolite Use and adjustments of the Theodolite Working out and potting the traverse Curve tracing

(*d*) *Trigonometrical* Surveying Base line Triangulation Satellite Stations Calculations Plotting

Text Book Rurki Manual of Surveying—Chapters I to VII and IX to XIII

IV Drawing and Estimating—

(*a*) *Architectural Drawing* from copies and from specifications of plans sections and elevations of buildings of all kinds bridges anicuts escapes locks and sluices

(*b*) *Estimating* including taking out quantities from plans and notes for earth work, buildings bridges and irrigation works Text book Civil Engineering College Papers No IX

(*c*) *Topographical Drawing* of surveys of all kinds

SCHEME OF MARKS

The marks awardable at the final Examination are as follow To secure a certificate as Assistant Engineer, 33 per cent of the marks under each of the five subject heads must be gained and 50 per cent of the total The gain of 66 per cent of the total constitutes a pass with credit

I Mathematics—		
Arithmetic	100	
Algebra	100	
Euclid	100	
Mensuration	100	
Trigonometry	100	
Statics and Dynamics	100	
Conic Sections and Co ordinate Geometry	50	
	——	650
II Engineering—		
Building Materials and Construction	100	
Earth work and Road making	100	
Bridges and Irrigation Works	100	
Hydrostatics	100	
Hydraulics	100	
Practical Mechanics	100	
Applied Mechanics	150	
	——	750

III Surveying and Levelling—		
Chain Compass and Sextant Surveying	100	
Levelling	100	
Theodolite and Traverse Surveying	100	
Session Work	200	
		500
IV Drawing and Estimating—		
Drawing from Specification	100	
Copying and Colouring	100	
Estimating	100	
Session Work	100	
		400
V Sessional Examinations in all Subjects	600	
		500
		2 900

Th se mark t w dabl t ca d d t wh t C ll g St d nt S h t d ca d dat p t f t ry ni t n in th m b bj t heads q d t p f m th f ll w g p t cal w k und th p rv f th C ll g f Offi f th P bl W k D p rtm t

( ) T y with th Ch d C mp p f m d t ly d ffi lt gr d t l tha q m l ea d t pl t t cal f 200 f t t l h

(*b*) T ru l f l l t l th n m l l gth t t l ro t t ry q art m l d t pl t th l l n cal f 200 t t t l in h h tal d 10 f t t l in h rt cal

( ) T t w th th th d lit n f t l tha 50 t m k p th t d pl t th w k

Th fi ld b k d di w g t b bm tt d to th Pri p l w th rt ficat f m th S p g Offi t th ff t th t th ca d dat und t d th dj tm ts f th Th d l t d L l d if th y f d t t t fi t will b ward d

A d p t ca d d t m t bm t hi ppl cat by th d t p ly t fi d th *G tt* d d w th t h f *by M cy O de C y A t C h* A ca d d t t G rnm t mpl y m t p d dd t t h l ty C t fi t t ficat f m G rnm t Medical Offi d l g h fit f th t d w k f tl l bl W k D p tm t

Civil Engineering College
Madras
20*th April* 1883

H D Love Lieut R E
Principal, C E College

CIVIL ENGINEERING COLLEGE, MADRAS

SECOND DEPARTMENT OR OVERSEER CLASS (MILITARY DIVISION)

THE Course of Study is regulated to fit Non commissioned Officers and Men of British Regiments for the Upper Subordinate Establishment of the Public Works Department

RULES OF ADMISSION

2 The number of vacancies is limited to five annually

3 Candidates must

(*a*) be Non commissioned Officers or Men of Her Majesty's British Forces of not less than two years service and under twenty five years of age

(*b*) have uniformly conducted themselves to the satisfaction of their Commanding Officers in the discharge of their duties as Non commissioned Officers Privates Gunners Drivers &c

(*c*) be thoroughly trustworthy and well conducted men who can be relied on to superintend Native workmen and to treat them in a becoming manner

4 Applications from Commanding Officers for the examination of such men as they may recommend for admission should reach the Principal not later than the 1st April of each year and should be accompanied by the following documents viz —

(*a*) Extract from Troop and Company or Battery Defaulter Sheet

(*b*) Do from third page of Attestation

(*c*) Do from Court Martial Sheet

(*d*) Certificate of sound health and unimpaired constitution from a Commissioned Medical Officer

N B —When forwarding application it should be stated whether the candidate is married

5 All candidates must undergo an Entrance Examination about the middle of April in the following subjects —

Arithmetic —The whole subject One 3 hour Paper

English Dictation —Half an octavo page of some easy work

English Grammar and Composition —Grammatical Rules construction of sentences short Essay One 2 hour Paper

Examination Papers will be forwarded from the College to Officers Commanding Regiments and Batteries who are requested to detail one or more Officers to superintend the Examination in accordance with rules which will be forwarded with the papers Candidates from Madras St Thomas Mount and Poonamallee will be examined at the College The Examination occupies one day and due notice of its date will be given in the *Fort St George Gazette*

6 The candidates selected for admission whose names will be published in the *Gazette* issues of May as well as communicated to the Adjutant General will proceed to Bangalore to study a vernacular language (Tamil or Telugu at the option of each candidate) and will be there attached to a Regiment At the expiration of a year they will undergo an Examination in Language and those who are successful will proceed to Madras so as to join the College about 1st August

COURSE OF STUDY &c

7 The Session commences annually on the first Monday in August and the Course of Study at the College extends over one year and ten months Examinations are held half yearly and a final Examination conducted chiefly by independent Examiners takes place at the end of the course when certificates of qualification as Supervisor and Overseer according to the degree of proficiency attained are awarded to successful candidates A general idea of the subjects studied will be gained from the *Rules for the Final Examination for Certificates as Supervisor and Overseer* The Second Department containing Civil as well as Military Students is divided into two classes which comprise First and Second year Students respectively Each class attends early out door work two or three times a week executing Surveys taking Levels setting out work inspecting the manufacture of Building Materials the progress of Masonry works under construction &c Notes are made of all inspections and fair reports have subsequently to be

submitted The in door attendances comprising four daily of 1½ hours each are divided nearly equally among the five subject heads—Mathematics Engineering Surveying Drawing and Estimating and Vernacular Language

8 The vacations cover about two months in the middle of the year and about three weeks at Christmas Sundays and Wednesdays are non working days

9 Military students while at the College are allowed the same pay rations and clothing which they draw while with their Regiments and in addition a stipend of ten rupees a month each

10 Their position will be strictly that of probationers and they will continue to be borne on the strength of their respective Regiments Those of them who on successfully passing the final examination cannot be at once provided for and those who prove not to be qualified in respect of character or attainments will revert to their Regiments

11 Whilst at College they will wear the undress uniform of their Regiments and will be under the command of the Principal or in his absence of the Officer acting for him

12 They are exempt from payment of College fees and are supplied with the Text books in use and Drawing Instruments Colors &c, gratis The College Library consisting of about 1 500 volumes is also open to them

13 They reside in Barracks and Quarters adjoining the College

14 Ordinarily not more than three of the passed men who are considered in every way fit will be appointed annually to the Public Works Department The names of men who cannot be provided for at the time of passing will be registered in the Office of the Chief Engineer Public Works Department Passed students selected by the Chief Engineer are attached to the Department in the first instance as Apprentice Overseers 1st Grade and at the expiration of a year of satisfactory service are brought on the permanent strength of the establishment and transferred to the Unattached List As Apprentice Overseers 1st Grade they will receive a staff allowance sufficient to bring their total pay to Rs 80 and will in addition be provided with free quarters

On first appointment to the Public Works Department as Apprentice they are generally allowed an advance of one months pay to be repaid in six equal monthly instalments and on permanent appointment to the Department they are granted an outfit allowance of Rs 150

15 Military Overseers 1st Grade receive a staff salary of Rs 85 in addition to the Military pay and allowances of their rank They are eligible for promotion to the rank of Sergeant and subsequently to the various ranks of Warrant Officer Departmentally they may rise by promotion to the position of Sub Engineer, 1st Grade the staff salary of which is Rs 250

CIVIL ENGINEERING COLLEGE,
Madras,
1883

H D LOVE, Lieut R E
Principal, Civil Eng College

Encl. to G.O. 13

CIVIL ENGINEERING COLLEGE, MADRAS

SECOND DEPARTMENT OR OVERSEER CLASS (CIVIL DIVISION)

The course of study is regulated to fit students for the position of Overseer of Works in the Public Works Department or under Local Fund Boards Municipalities or other employers

Rules of Admission

2 All candidates must produce the following certificates in original —

(*a*) Health certificate from a gazetted Government Medical Officer showing that the candidate is physically fit for the outdoor duties of the Public Works Department and that he is free from liability to small pox

(*b*) Certificate of age showing that he is over 16 and under 22 years of age

(*c*) Certificate of good conduct and character covering a period of not less than two years immediately prior to the application

To facilitate the production of the health certificate a letter to a Madras District Surgeon will be granted to any candidate who has produced the remaining certificates on his personal application to the Principal

3 Candidates who are Matriculates of the Madras or other Indian University must submit their certificates not later than 15th May On production of their University certificates they will be admitted to the Second Department without examination

4 All other candidates must produce their certificates by 15th March and undergo an Entrance Examination about the middle of April in the following subjects —

Arithmetic —The whole subject One 3 hour paper

English Dictation —Half an octavo page of some easy work

English Grammar and Composition —Grammatical rules construction of sentences short essay One 2 hour paper

The examination which occupies one day is held at the Civil Engineering College and at any Public Works Department Divisional Office at which a candidate may intimate his desire to appear Due notice will be given in the *Fort St George Gazette* of the date of the examination and the names of the candidates selected for admission will be published in the Gazette issues of May

5 Candidates from the Civil Orphan Asylums to a number not exceeding four per annum may be admitted as free students to the Second and Special Departments In addition to these a number of free students not exceeding 5 per cent of the total number of paying pupils is admissible Applications for these studentships will not be entertained unless accompanied by a certificate from a Government officer of standing that the candidates friend are unable to bear the expense of the prescribed fees

6 The Walker Scholarship of (about) Rs 13 *per mensem* is tenable for two years by a native of Malabar Canara or the Nilgiris Each candidate must submit the usual certificates and in addition evidence of his religion or sect and of his being a native of one of the above districts He must pass the Entrance Examination together with a colloquial test in Malayalum or Canarese The examination is held only at Calicut and Mangalore If more than one candidate be eligible preference is given first to a Protestant Christian second to a Catholic Christian third to a Hindu or Mahomedan The holder of this scholarship is exempt from the payment of fees The scholarship will next fall vacant in 1885

Course of Study &c

7 The session commences annually on the first Monday in August and the course of study extends over one year and ten months Examinations are held half yearly and a final examination conducted chiefly by an independent Examiners takes place at the end of the course when certificates of qualification as Supervisor and Overseer according to the degree of proficiency

attained are awarded to successful candidates A general idea of the subjects studied will be gained from the *Rules for the Final Examination for Certificates as Superviso and Overseer* The department is divided into two classes comprising first and second year students respectively Each class attends early out door work two or three times a week executing surveys taking levels setting out work inspecting the manufacture of building materials the progress of masonry works under construction &c Notes are made of all inspections and fair reports have subsequently to be submitted The in door attendances comprising four daily of 1½ hours each are divided nearly equally among the five subject heads Mathematics Engineering Surveying Drawing and Estimating Vernacular language

8 The vacations cover about two months in the middle of the year and about three weeks at Christmas Sundays and Wednesdays are non working days

9 The fees are Rs 3 *per mensem* payable on 15th of each month unless that day falls on a Sunday or Wednesday when they are payable on 16th The fees for January are payable on 16th February and those for June and July on 15th August

10 Students are non resident They provide their own books and drawing instruments but stationery and surveying instruments are supplied by the College The following books and instruments are required during the course those marked with an asterisk being needed at the outset should be in the possession of students at the time of joining

The prices given are approximate

	RS	A	P
Examples in Mensuration	1	8	0
* Lodhunter s Euclid for Beginners	2	8	0
Do Algebra for do	2	8	0
Do Trigonometry for Beginners	2	8	0
Do Mechanics for do	4	8	0
Civil Engineering College Papers, Engineering No X three parts	11	0	0
Do do Estimating No IX, one part	8	8	0
Rurki Manual of Surveying	3	8	0
* Civil Engineering College Papers Tamil Nos I and IV	4	8	0
* *Or* Civil Engineering College Papers Telugu Nos II and VII	4	8	0
* Case of Drawing Instruments not inferior to those sold at the Public Works Stores Madras as *Third class* about	28	0	0
* Set of Marquois Scales	8	0	0
* Rolling Parallel Rule 18 inch	9	0	0
Set of colors and brushes	7	0	0

11 The College Library, consisting of about 1 500 volumes is open to students

12 Five scholarships of Rs 15 each tenable for one year from 1st August are awarded to the students who most distinguish themselves at the examination held at the close of the first year of study Students holding these scholarships are exempt from the payment of fees Scholarships are liable to withdrawal for misconduct or want of application

13 Appointments to the Upper Subordinate Establishment of the Public Works Department are not guaranteed by Government to students who are successful at the final examination but under G O Public Works Department No 2733 W , dated 4th November 1881, the maximum number of appointments to that Department from the College is fixed at ten annually of which three are reserved for military students The passed students selected by the Chief Engineer Public Works Department are attached to the department in the first instance as Apprentice Overseers and at the expiration of a year of satisfactory service they are brought on the permanent strength of the establishment The remaining successful students have generally little difficulty in securing technical employment under the various Local Fund Boards and Municipalities The pay of an Overseer at the outset ranges from Rs 40 to Rs 80 In the Public Works Department promotion proceeds to the rank of Sub Engineer, salary Rs 400

CIVIL ENGINEERING COLLEGE,
Madras,
1883

H D LOVE Lieutenant, R E
Principal, Civil Engineering College

Under 08-15

CIVIL ENGINEERING COLLEGE, MADRAS

EXAMINATION FOR CERTIFICATES AS SUPERVISOR AND OVERSEER, PUBLIC WORKS DEPARTMENT

THE Examination is held annually in May and is open to Second year Students of the College Second Department and on payment of a fee of Rs 15 to independent candidates The examination takes place at the Civil Engineering College but papers will be sent to any Public Works Department Divisional Office at which an independent candidate may wish to appear Notice of the date of the commencement of the Examination is given in the *Fort St George Gazette* issues of the previous March

The Test comprises —

I MATHEMATICS—

(*a*) *Arithmetic* The whole Any Text book

(*b*) *Algebra* to end of Quadratic Equations with Progressions Permutations and the Binomial Theorem Text book Todhunter's Smaller Algebra

(*c*) *Euclid* Books I II III IV with easy deductions Text book Todhunter's Euclid for Beginners

(*d*) *Mensuration* —of the Areas Surfaces and Volumes of simple figures College Text book

(*e*) *Trigonometry* —Solution of Triangles including the use of Logarithms Text book Todhunter's Smaller Trigonometry

(*f*) *Statics* —Composition and resolution of Forces The Mechanical powers. Work Text book Todhunter's Mechanics for Beginners

II ENGINEERING—Text-book Civil Engineering College Papers No X 3 Vols.

(*a*) *Building Materials* their properties, and mode of preparation

(*b*) *Building Construction* including Foundations Masonry Carpentry Floors Roofs, &c

(*c*) *Earth work and Road making* —Cuttings Embankments and their volumes Ordinary and Hill Roads Curve tracing

(*d*) *Bridges and Irrigation Works* including Timber and Masonry Bridges Tanks Channels and their appendages

(*e*) *Hydraulics* comprising the estimation of the discharges of Rivers Channels Pipes and Escapes and the time of filling and emptying Locks

(*f*) *Strength of Materials* under tension compression and transverse stress principles of design

III SURVEYING AND LEVELLING—Text book Burki Manual of Surveying

(*a*) *Surveying* with the Chain Chain and Prismatic Compass or Chain and Surveying Compass Plotting the Surveys Use of the Box Sextant

(*b*) *Levelling* comprising the use of the Dumpy and Y Levels in taking longitudinal and cross sections and in contouring Adjustments of these instruments Plotting the levels

(*c*) *Traverse Surveying* with the use and adjustments of the Theodolite Working out and plotting the Traverse

IV DRAWING AND ESTIMATING—

(*a*) *Drawing from Specification* Plans and Sections of Buildings of all kinds Bridges and Irrigation Works

(*b*) *Copying* Architectural and Topographical Drawings to changed scales and colouring and finishing the copies

(*c*) *Estimating* including taking out quantities from plans and notes for Earth work Buildings Bridge and Irrigation Works Text book Civil Engineering College Papers No IX

V LANGUAGE —Tamil or Telugu Conversation easy sentences and easy translation on topics connected with the P W D

Text books —Tamil—Civil Engineering College Papers Nos 1 and 4

Telugu— do do Nos 2 and 7

SCHEME OF MARKS

The marks awardable at the final examination are as follow —To secure a certificate as Supervisor P W D 35 per cent of the marks under each of the five subject heads must be gained and 60 per cent of the total For a certificate as Overseer, P W D , the percentages are 25 and 40 respectively

I MATHEMATICS —		
Arithmetic	100	
Algebra	100	
Euclid	100	
Mensuration	100	
Trigonometry and Statics	100	
Session Examinations †	125	
		625
II ENGINEERING—		
Building Materials and Construction	100	
Earth work and Road making	100	
Bridges and Irrigation Works	100	
Hydraulics	100	
Strength of Materials	100	
Session Examinations †	125	
		625
III SURVEYING AND LEVELLING—		
Chain and Compass and Sextant Surveying	100	
Levelling	100	
Traversing with Theodolite	100	
Surveying during Session †	250	
Session Examinations †	100	
		650
IV DRAWING AND ESTIMATING—		
Drawing from Specification	100	
Copying and Colouring	100	
Estimating	100	
Drawing during Session †	150	
Session Examinations †	100	
		550
V LANGUAGE—		
Tamil or Telugu	100	
Session Examinations †	50	
		150
		2 600

* NOTE —Tamil obligatory for Natives of Telugu Districts and *vice versâ*

† These marks are not awardable to candidates who are not College Students Such outside candidates as pass a satisfactory examination in the remaining subject heads are required to perform the following practical work under the supervision of the College or of an Officer of the Public Works Department

(*a*) To survey with the Chain and Compass a piece of moderately difficult ground not less than one square mile in area and to plot it on a scale of 200 feet to 1 inch

(*b*) To run a line of levels not less than one mile in length to take cross sections at every quarter mile and to plot the levels on scales of 200 feet to 1 inch horizontal and 10 feet to 1 inch vertical

(*c*) To traverse with the theodolite an area of not less than 50 acres to make up the traverse and plot the work

The field books and drawings are to be submitted to the Principal with a certificate from the Supervising Officer to the effect that the candidate understands the adjustments of the Theodolite and Levels and if they are found satisfactory a certificate will be awarded

An independent candidate must submit his application by the date previously notified in the *Gazette* and send with it his fee *by Money Order Currency Notes or Cash* A candidate not in Government employ must in addition produce a certificate from a Government Medical Officer showing his fitness for the out door work of the P W D

CIVIL ENGINEERING COLLEGE,
Madras
20th April 1883

H D LOVE Lieut, R E
Principal, C E College

Feb 1881 17

CIVIL ENGINEERING COLLEGE, MADRAS

EXAMINATION FOR CERTIFICATES AS SURVEYOR

THE Examination is held annually in May and is open to Second year Students of the College Survey Class and on payment of a fee of Rupees 7 8 0 to independent candidate The Examination takes place at the Civil Engineering College but papers will be sent to any Public Works Department Divisional Office at which an independent candidate may wish to appear Notice of the date of the commencement of the Examination is given in the *Fo t St George Ga ette* issues of the previous March

The Test comprises —

I Surveying with the Chain Chain and Prismatic Compass or Chain and Surveying Compass Plotting the Surveys Use of the Box Sextant

II Levelling comprising the use of the Dumpy and Y Levels in taking longitudinal and cross sections and in contouring Adjustments of these instruments Plotting the Levels

III Traverse Surveying with the use and adjustments of the Theodolite Working out and plotting the Traverse

IV Topographical Plan Drawing

Text Book Rus l s Manual of Surv ying

THE SCHEME OF MARKS IS AS FOLLOWS —

I	Chain Compass and Sextant Surveying (Examination Paper)	100
II	Levelling (Examination Paper)	100
III	Traversing with the Theodolite (Examination Paper)	100
IV	Copying and Colouring Topographical Plan	100
V	Session Out door Work	100
VI	Session In door Work	100
VII	Session Examinations *	100
		700

First Second and Third Class Certificates are granted to successful candidates

A First Class Certificate requires 66 per cent of the marks on each of the seven subject heads and 75 per cent of the total marks

A Second C ass Certificate 50 per cent and 66 per cent respectively

A Third Class Certificate 33 per cent and 50 per cent respectively

Subject head III is not required for Second and Third Class Certificates

No person can be employed as a Surveyor in the Public Works Department unless he holds a certificate as such from the Civil Engineering College

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N B —Th m k t w d bl t d dat wh t C ll g St d t S h t d ca didat p t f t ry m t th m g bj th d q d t p f rm th f ll wing pra t cal w k d th p vi f th C ll g f Offi f th P bli W k D p tm nt —

( ) T rv y w th th Ch n d C mp p f m d t ly d ffi ult g und t l than n quar mil n ea d to pl t t cal f 200 f t t l h

(*b*) T ru l f l l t l th n mil l gth t t l t t y qua t mil d t pl t th l l l f 200 f t t l h h iz tal d 10 f t t l h ert cal

( ) T t with th Th d l t f t l th 0 t mak p th tr d pl t th w k Th F ld B k d Draw g t b bm tt d t th P p l w th th t ficat f m th S p g Offi t th ff t th t th a l lat d t d th dj tm t f th Pl d l t d L l d f th y f d t fact t fi t w ll b w d d C d d f S d Third Cl C rt fi t n d bm t ly pla ( ) d (*b*) d t q d t p th djustm nt f th Th d l te

A l p l t d d t m t bm t h ppl at by th d t p ly t fi d in th *G tt* d d w th t h f *by Money O d C cy N t C h* A ca d d t t G m t mpl y m t dd t p d rt fi t f G m t M d cal Offi h w his fit f th t d w k f th P W D

CIVIL ENGINEERING COLLEGE
Madras
20th April 1883

H D LOVE Lieut R E
Principal C E College

CIVIL ENGINEERING COLLEGE, MADRAS

SPECIAL DEPARTMENT (SURVEYING AND DRAWING CLASSES)

The courses of study in this department are designed to fit students for the positions of Surveyor and Draftsman

Rules of Admission

2 All candidates must produce the following certificates in original —

(*a*) Health certificate from a gazetted Government Medical Officer showing that the candidate is physically fit for the duties (out door for Surveyors in door for Draftsmen) of the Public Works Department and that he is free from liability to small pox

(*b*) Certificate of age showing that he is over 16 and under 22 years of age

(*c*) Certificate of good conduct and character covering a period of not less than two years immediately prior to the application

To facilitate the production of the health certificate a letter to a Madras District Surgeon will be granted to any candidate who has produced the remaining certificates on his personal application to the Principal

3 Applications for admission accompanied by certificates must reach the Principal not later than 15th March and candidates undergo an entrance examination about the middle of April in the following subjects —

Arithmetic —The four Simple and Compound Rules Reduction Vulgar and Decimal Fractions One 3 hour paper

English Dictation —Half an octavo page of some easy work

English Grammar and Composition —Grammatical rules short essay One 2 hour paper

The examination which occupies one day is held at the Civil Engineering College and at any Public Works Department Divisional Office at which a candidate may intimate his desire to appear Due notice will be given in the *Fort St George Gazette* of the date of the examination and the names of the candidates selected for admission will be published in the Gazette issues of May

4 Candidates from the Civil Orphan Asylums to a number not exceeding four per annum may be admitted as free students to the Second and Special Departments In addition to these a number of free students not exceeding 5 per cent of the total number of paying pupils is admissible Applications for these studentships will not be entertained unless accompanied by a certificate from a Government officer of standing that the candidates friends are unable to bear the cost of the prescribed fees

Courses of Study &c

5 The session commences annually on the first Monday in August and the courses of study extend over one year and ten months

6 The vacations cover about two months in the middle of the year and about three weeks at Christmas Sundays and Wednesdays are not working days

7 Students are non resident The fees are Rs 3 per mensem payable on 15th of each month unless that day falls on a Sunday or Wednesday when they are payable on 16th The fees for January are payable on 15th February and those for June and July on 15th August

8 The College Library consisting of about 1 500 volumes is open to students

9 The Special Department consists of a Surveying Class and a Drawing Class

I Surveying Class

10 The object of this class is to train men as practical Surveyors and Levellers for the Public Works Department and other services A general idea of the subjects studied and practised will be gained from the *Rules for the Final Examination for certificate as Surveyor* Exami

nations are held half yearly and a final examination takes place at the end of the course when certificates as Surveyor—First Second or Third Class according to the degree of proficiency attained—are awarded to successful candidates The class is divided into two divisions comprising first and second year students respectively Each division attends early field work two or three times a week The in door attendance extends from 11 A M to 3 P M daily when theoretical instruction is given and field work plotted

11 Five scholarships of Rs 8 each tenable for one year from 1st August are awarded to the students who most distinguish themselves at the examination held at the close of the first year of study Students holding these scholarships are exempt from payment of fees Scholarships are liable to withdrawal for misconduct or want of application

12 Students provide their own books and drawing instruments but stationery and surveying instruments are supplied by the College The following instruments &c which are required during the course have their approximate prices shown opposite to them Those marked with an asterisk are required at the outset —

	RS	A	P
* Case of Drawing Instruments not inferior to those sold at the Public Works Stores Madras as *Third class* about	28	0	0
* Set of Marquois Scales	8	0	0
* Rolling Parallel Rule 18 inch	9	0	0
Set of colors and brushes	7	0	0
Rurki Manual of Surveying	3	8	0

13 All Surveyors employed in the Public Works Department must hold certificates as such from the Civil Engineering College There is a demand for men of this class outside the Public Works Department Salaries commence at about Rs 50 and rise to about Rs 150

II Drawing Class

14 The object of this class is to train men to become Draftsmen and Estimators in the Public Works Department and other services A general idea of the subjects studied and practised will be gained from the *Rules for the Final Examination for certificates as Draftsman and Estimator* Examinations are held half yearly and a final examination takes place at the end of the course when certificates as Draftsman and Estimator—First Second or Third Class according to the degree of proficiency attained—are awarded to successful candidates The class is divided into two divisions comprising first and second year students respectively The hours of attendance are from 10 A M to 3 P M daily

15 Five scholarships of Rs 8 each tenable for one year from 1st August are awarded to the students who most distinguish themselves at the examination held at the close of the first year of study Students holding these scholarships are exempt from payment of fees Scholarships are liable to withdrawal for misconduct or want of application

16 Students provide their own books and instruments but stationery is supplied by the College The following instruments &c which are required during the course have their approximate prices shown opposite them Those marked with an asterisk are required at the outset —

	RS	A	P
* Case of Drawing Instruments not inferior to those sold at the Public Works Stores, Madras as *Second class*, about	45	0	0
* Set of Marquois Scales	8	0	0
* Rolling Parallel Rule 18 inch	9	0	0
Set of colors and brushes	7	0	0
Civil Engineering College papers No IX Estimating	8	8	0

17 All Draftsmen employed in the Public Works Department must hold certificates from the Civil Engineering College Salaries vary from Rs 25 to Rs 100 per mensem There is a considerable demand for Draftsmen from departments of Government other than the Public Works Department and from Local Fund Boards

Civil Engineering College,
Madras,
1883

H D LOVE Lieutenant R I
Principal, Civil Engineering College

CIVIL ENGINEERING COLLEGE, MADRAS

EXAMINATION FOR CERTIFICATES AS DRAFTSMAN AND ESTIMATOR

THE Examination is held annually in May and is open to Second year Students of the College Drawing Class and on payment of a fee of Rupees 7 8 0 to independent candidates The Examination takes place at the Civil Engineering College but papers will be sent to any Public Works Department Divisional Office at which an independent candidate may wish to appear Notice of the date of the commencement of the Examination is given in the *Fort St George Gazette* issues of the previous March

The Test comprises —

I Drawing from Specification Plans and Sections of Buildings of all kinds Bridges and Irrigation Works

II Copying Architectural and Topographical Drawings to changed scales and colouring and finishing the copies

III Estimating including taking out quantities from Plans and Notes for Earth work and for Buildings Bridges and Irrigation Works Text Book Civil Engineering College Papers No IX

THE SCHEME OF MARKS IS AS FOLLOWS —

I	Drawing from Specification	100
II	Copying and Colouring	100
III	Estimating	100
IV	Session Work	100
V	Session Examinations	100
		500

First Second and Third Class Certificates are granted to successful candidates

A First Class Certificate requires 66 per cent of the marks on each of the five subject heads and 75 per cent of the total marks

A Second Class Certificate 50 per cent and 66 per cent respectively

A Third Class Certificate 33 per cent and 50 per cent respectively

No person can be employed as a Draftsman in the Public Works Department unless he holds a certificate from the Civil Engineering College

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Th m k t w d bl t ca didat wh t C ll g St d t

N TE —A d p d t ca d l t m st bm t h ppl t by th d t p ly t fi d th *G tt* and d w th t h f *by M y O d C r y N t C h* A n l dat t G rnm t mpl y m t ddit p d C rt ficat f m G rnm t M d cal Offi h w g h fit f th P bl S

CIVIL ENGINEERING COLLEGE
Madras
20th April 1883

H D LOVE Lieut R E
Principal C E College

To

K Sheshadri Ayyar Esq B A B L

Dewan to H H The Maharajah of Mysore

Bangalore

1-23

No information about the scholarship he was once receiving

Honored Sir,

On applying for admission to the Principal C E College Madras, he wrote a Demi-official letter to the Director of Public Instruction asking him whether it was permissable for him to admit us to the College at present A reply was sent to him by return of post that it was not desirable to admit students at any time other than the prescribed one Therefore I could not join the College at present The first Session of the College Commences on or about the 15th of January 1884 and the Students from Mysore are requested by the Principal to join the College then

Your honor's private secretary wrote to me on the 5th of April 1883 or there about's that orders would be sent to continue the scholarship I was getting then till I got the Engineering Scholarship In the same letter I was directed to join the College in August Now for the reasons given above, I could not join the College in August

I therefore humbly request your honor to be good enough to send orders to continue the [illegible] Scholarships till January next when I shall get the Engineering scholarship

In your honor's proceedings dated the 7th of May 1883, the Engineering Scholarships were granted to five students from the Mysore Province at the rate of Rs 15 per mensem for two years and a half and the students were directed to join the College in August But the Students cannot be admitted at present Therefore the Scholarships are to be given for two years only from the 1st of January 1884 One of the four students in Shimoga Anjuman F A of Mysore has given up the Scholarship As I have explained to your honor in a previous letter of June, Rs 15 are quite inadequate for Engineering students as they have to pay the enormous sum of Rs 16 as their Shool fees Therefore I request your honor to be good enough to increase the amount of the Scholarship to at least Rs 20 per mensem to be given for two years and no more By this, the Government would, I think, be in no loss for in Head of Survey Rs 15 per mensem for two years and a half, we request your honor to give us Rs 20 per mensem for two years only We request

your honour notified, to increase our scholarship to at least Rs 60 per annum for which act of kindness we shall as in duty bound pray &c

We beg to remain
Your honour's most obedient servants

R. A. Ramaswamy Mudaliar
No 37 Tank Square
Triplicane
Madras